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Roland Moser

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EXAMINER

CHAPMAN JR, JOHN E

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



### DETAILED ACTION

1. The reply filed on September 25, 2008 was in response to a **non-final** Office action, but was inadvertently processed as a reply to a final rejection. Accordingly, the Advisory Action mailed on October 27, 2008 is hereby **vacated** and the amendment filed on September 25, 2008 has been entered. Applicant's telephone call on October 10, 2008 bringing the error to the examiner's attention is appreciated.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 6-8 and 10 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Claims 6-8 recite an intended use and do not further limit the subject matter of claim 1 by reciting an additional structural limitation. Likewise for claim 10 with respect to claim 9. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form.

4. Claims 1 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Pelrine et al. (6,361,268).

Pelrine et al. discloses a two dimensional array of permanent magnets (76) in Fig. 5B and a diamagnetic plate (58) levitated by the array. Note also the diamagnetic plate (210) in Fig. 13. The diamagnetic plate is inherently capable of being subjected to inertial forces. The intended

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use as an inertial sensor is not given any weight, since there is no structure recited in the body of the claim that is specific to sensing inertial forces.

Regarding claim 6, the intended use as a bi-directional non-contact accelerometer or seismometer is not given any weight, since there is no structure recited in the body of the claim that is specific to bi-directional non-contact sensing of acceleration or seismic motion.

Regarding claim 7, the intended use as a non-contact bi-directional inclinometer or tiltmeter is not given any weight, since there is no structure recited in the body of the claim that is specific to bi-directional non-contact sensing of inclination or tilt.

Regarding claim 8, the intended use as a non-contact gravimeter is not given any weight, since there is no structure recited in the body of the claim that is specific to non-contact sensing of gravitational force.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pelrine et al.

Regarding claim 2, it would have been obvious to use a Halbach 2D array in lieu of the array in Fig. 5B of Pelrine et al. in order to produce the largest diamagnetic force.

Regarding claims 6 and 7, it would have been obvious to use a gravimetric device to measure acceleration and inclination.

6. Claims 3-5, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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7. Applicant's arguments filed September 25, 2008 have been fully considered but they are not persuasive. Regarding the objection to claims 6-8 and 10, applicant argues that the claims are "device" claims and are not "intended use" claims. However, merely to recite "a bi-directional non-contact accelerometer" in the preamble of claim 6, for example, merely recites an intended use of the claimed inertial sensor to measure bi-directional acceleration. There is no structure recited in the body of claim 6 directed to measuring bi-directional acceleration. Consequently, claim 6 fails to provide a further structural limitation to the inertial sensor recited in claim 1. Claim 6 should recite, for example, a means for detecting motion of the diamagnetic element in two directions in response to bi-directional acceleration. Applicant's comparison to a car comprising a vehicle is not well taken. A car has well known structure additional to an engine, for example, a chassis and wheels. An accelerometer, however, has no clear structure additional to a proof mass.

Regarding the rejection of claims 1, 2 and 6-8 over Pelrine et al. (6,361,268), applicant argues that the amended claims require that the inertial sensor senses inertial forces, which is not disclosed or suggested in Pelrine. However, it is inherent in the structure of the device that the diamagnetic plate (58) in Fig. 2, for example, would be responsive to inertial forces applied to the apparatus (46) and would thereby sense inertial forces. Note, for example, Fig. 6 of Pelrine (5,396,136) wherein the levitated array (34) senses inertial forces. That Pelrine et al. (6,361,268) does not use the device to sense inertial forces is directed to the intended use of the apparatus and does not preclude a finding of anticipation if the limitations at issue are inherent in the prior art. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus"

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if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). See MPEP 2114.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John E. Chapman whose telephone number is (571) 272-2191. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John E Chapman/  
Primary Examiner  
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